

Welcome
Who We Are
What We Do
Resources
How We Work
Where We Are Going
How We Meet Our Customers' Needs

United States Army

Redstone Technical Test Center (RTTC)





What We Do

Modeling, Simulation, and
Hardware/Human-in-the-Loop
Technology Integrated into Testing

Modeling, simulation, and hardware/human-in-the-loop technology, when appropriately integrated and sequenced with testing, provide each customer the best tests, at a reasonable cost, within their time schedule. This "advanced testing" process specifically 1) reduces the cost of life-cycle testing, 2) provides significantly more engineering/performance insights into each system evaluated, and 3) reduces test time and lowers program risk. This process also significantly reduces the number of destructive tests required over the life of the product or weapon system.

The integration of modeling and simulation into testing provides insights into trends and tendencies of weapon system performance that may otherwise be missed by classical testing. Live testing over a weapon system operational envelope is cost/time prohibitive. Validated models and simulations allow expansion of the testing capabilities for evaluation of weapon system performance over the full operational envelope. This technology extends to the collection, storage, and distribution of weapon test data for real-time interaction, performance analysis, and decision-making using the Simulation Test and Evaluation Process (STEP).

Overview

Primary Services & Capabilities

Test Management Services

Supplemental Services

Web Site Map/
Navigation Outline

Doing Business
With RTTC

Employment
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Keyword/Key
Phrase Search

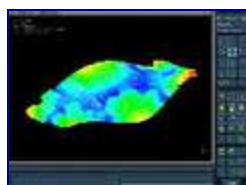
Links to
Related Sites

Acknowledgement

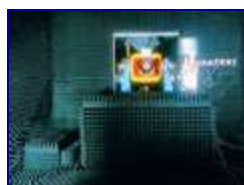
Hi Perf. Computing
Distributed Center

Request Test
Services

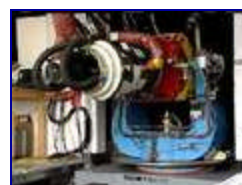
Home



Finite element
analysis of a
circuit card



STAF simulation
chamber with
missiles under



Longbow Hellfire
HWIL testing

test



Sequential view of virtual missile flight during HWIL testing

Primary Services and Capabilities

- Testing and measurement to validate customer's models
- Real-time distributed testing across fiber optic networks
- System-level performance information from subsystem testing
- Integration of live and virtual components and environments
- Improving the actual test ("test the test")

Specialized Facilities, Equipment, and Tools

- Synthetic environments
- High-Performance Computer (HPC) Distributed Center
- High-bandwidth fiber network infrastructure
- Hardware-in-the-Loop (HWIL) facilities
- Human-in-the-Loop facilities
- Virtual Proving Ground (VPG) tools

Application of Assets to Customer's Needs

- Weapon system intraoperability and interoperability
- Controllable/repeatable testing environments for evaluation of alternative source selection
- Life-cycle performance and reliability verification

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